

should have dared to hope for; in fact, a similar treatment of the Oriental Insect-fauna alone would produce a small library of books such as no Government could be expected to take the responsibility of publishing. But should the production of a series of Manuals of the Indian Invertebrata ever be realized, such books as Mr. Distant's will be of great importance in the identification of species, to be briefly described in the smaller works; but in that case we hope that they may not, as in the case of the late Dr. Day's 'Indian Fishes,' cause the elimination of nearly all synonymy.

That Mr. Distant's book will be somewhat voluminous may be inferred from the fact that this first part includes, besides the preliminary general matter, the descriptions of only twenty-eight species belonging to four genera, and leaves 9 genera still to be treated in his first subfamily of Cicadinae. The descriptions are carefully drawn up, and the student ought to have little difficulty in determining the various species, especially with the aid of the beautifully-executed plates, two of which illustrate the present part. There is only one drawback to the treatment of the subject by the Author, namely, that he divides the family into two subfamilies, Cicadinae and Tibiceninae, solely upon characters belonging to the male insect, and that he seems inclined to lay rather much stress upon the development of the tympanic opercula, also a male character, in the distinction of species and genera; but with a book of which only a first instalment has appeared, any criticism is perhaps out of place.

Mr. Wood-Mason's 'Catalogue of Mantodea' is not so strictly an Indian book as Mr. Distant's. It is, in fact, a catalogue of the Insects of the family Mantodea contained in the Indian Museum; and although, as might be expected, it contains a great number of Eastern species, these are interspersed with others from various parts of the World, especially Africa and Australia, and even South America. This first part, which is probably about half of the entire work, includes notices of eighty-seven species, five of which are described as new, and the descriptions of some other species previously described by the Author are also given, as well as occasional notes on the characters of other forms, which are often illustrated with very instructive woodcut figures. Two new genera of Eremiaphilidae are characterized under the names of *Puroxyophthalmus* and *Parepiscopus*, both for forms in which the eyes project upwards more or less in the shape of horns.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

November 20, 1889.—W. T. Blanford, LL.D., F.R.S.,
President, in the Chair.

The following communications were read:—

1. "On the Occurrence of the Striped Hyæna in the Tertiary of the Val d'Arno." By R. Lydekker, Esq., B.A., F.G.S.

A portion of the left maxilla of a Hyæna, in the British Museum,

containing the entire carnassial, the hinder half of the third premolar, and traces of the inner extremity of a molar, was referred by the Author in 1885 to *H. striata*, and provisionally regarded as of Pleistocene age, but subsequently concluded to have been of Upper Pliocene age. The Author has also referred a right upper carnassial of a Hyæna from the Red Crag to the same species, on the supposition that Prof. Gaudry's reference of *H. arvernensis* to *H. striata* was correct. In the present case, Dr. Weithofer has concluded that *H. arvernensis* is entitled to rank as a valid species, and has accepted the Author's determination of the Red-Crag form, thereby implying that the identification of the latter with *H. arvernensis* was erroneous. Dr. Weithofer also states that all the specimens from the Pliocene of the Val d'Arno which have come under his notice are more nearly allied to the Crocutine group.

In the present paper, measurements of the recent, Red Crag, and Val-d'Arno specimens referred by the Author to *H. striata* were given, and the differences shown to be within the limits of individual variation, whilst the actual contour of the teeth corresponded, leading the Author to maintain the correctness of his original determination.

After comparison of the British-Museum specimen with the upper jaws of Hyænas from the Val d'Arno, figured by Dr. Weithofer, it was shown that the former specimen was distinct from *H. robusta* (which latter is allied to *H. felina* of the Siwalik Hills), whilst a nearer resemblance, though with well-marked specific difference, was made out with *H. topariensis*, which was in turn observed to be closely allied to, if not identical with, *H. Perrieri*.

It was observed that *H. arvernensis* could be with difficulty distinguished from *H. brunnea*, and that both of those were nearer to *H. striata* than to *H. crocuta*, whilst *H. Perrieri* appeared to connect them with the latter.

2. "On a new Genus of Siliceous Sponges from the Lower Calcareous Grit of Yorkshire." By Dr. G. J. Hinde, F.G.S.

The Author referred, in the first instance, to the discussion as to the nature of certain renuline bodies occurring in the Corallian of Yorkshire and elsewhere. Although regarded of late years as the globate spicules of a siliceous sponge, the apparent absence of acerate and forked spicules in association therewith has always presented a difficulty. Recently the Author has recognized in specimens from Scarborough certain siliceous sponges which seem to be formed entirely of globates. In outward appearance the sponge is upright, and palmate or fan-shaped, the largest being 140 millim. in height. The wall is 14 millim. thick, and consists of plates which anastomose so as to form a labyrinthine structure, and are perforated regularly by oval slits. The laminated walls are composed entirely of small reniform spicules (globates), well seen where secondary crystallization has not fused them together. The globates, like those of *Geodia*, are built up of fibres radiating from the centre.

and terminating on the outer surface in nodose ends, which causes a spotted appearance.

The exceptional character of these fossils consists in their having the siliceous skeleton composed entirely of globates. The nearest living form is *Placospongia*, in which both the axis and the dermal crust are formed of globates with an interspace built up of numerous pin-like spicules. Assuming the absence of pin-like spicules in the Scarborough fossil, the differences are more than generic. The name *Renulina*, given by Blake to the globates, having been preoccupied, the Author proposed that of *Rhavella* for the genus, and described the sponge from the Lower Calcareous Grit as *R. perforata*, sp. n.

December 4, 1889.—W. T. Blanford, LL.D., F.R.S.,
President, in the Chair.

The following communications were read:—

1. "On Remains of Small Sauropodous Dinosaurs from the Wealden." By R. Lydekker, Esq., B.A., F.G.S.

The Author first noticed some teeth from the Wealden of Sussex and the Isle of Wight, provisionally referred by Mantell, and subsequently by Sir R. Owen, to *Hyllosaurus*, which he had made the type of a species of *Pleurocoelus*. He then described the imperfect centrum of a dorsal vertebra from the Wealden of Cuckfield, preserved in the British Museum, and a somewhat larger imperfect vertebra obtained from the Wealden of Brook, Isle of Wight.

In the absence of any evidence in favour of a contrary view, he proposed provisionally to refer the vertebræ to *Pleurocoelus valdensis*, a name which he had given to the form represented by the teeth in a paper published in the 'Geological Magazine' for the current year. He stated that they afforded absolutely conclusive evidence of the occurrence in the English Wealden of a diminutive Sauropodous Dinosaur, which was the contemporary of the huge *Hoplousaurus* and the still more gigantic *Pelorosaurus*, and that they also served to increase the evidence as to the similarity of the Dinosaurian fauna of the Upper Jurassic of North America to that of the Upper Jurassic and Lower Cretaceous of Europe.

2. "On a peculiar horn-like Dinosaurian Bone from the Wealden." By R. Lydekker, Esq., B.A., F.G.S.

Among a series of vertebrate remains sent from the Dorsetshire County Museum to the British Museum, there is an imperfect, stout, short, cone-like bone from the Wealden of Brook, Isle of Wight. It appears to present a close resemblance to the horn-cores of the Dinosaur described by Prof. Marsh as *Ceratops*.

The Author did not regard the specimen as affording conclusive evidence of the existence in the Wealden of a large Dinosaur furnished with horn-like projections on the skull like those of the American *Ceratops*, but suggested that such might really prove to be its true nature.

December 18, 1889.—W. T. Blandford, LL.D., F.R.S.,
President, in the Chair.

The following communication was read:—

“On the Occurrence of the Genus *Girvanella*, and remarks on Oolitic Structure.” By E. Wethered, Esq., F.G.S.

The Author referred to his previous work, wherein he had shown that *Girvanella* is not confined to Silurian rocks, and that as a rock-forming organism it is more important than was supposed, occurring in the Gloucestershire Pea-grit, and also in the Coralline Oolite of Weymouth. He now dealt more in detail with its occurrence (1) in the *Carboniferous Oolitic Limestone*; and (2) in the *Jurassic Oolites*.

In the Carboniferous Limestone of the Avon valley, oolitic limestone occurs on four horizons, in three of which the Oolites rest on dolomite. In none of these three cases are there signs of *Girvanella*. From beds partly Oolitic, and not resting on dolomite, he has been able to determine two new species. The Oolite not associated with dolomite is less crystalline, and the original structure is better preserved.

In referring to *G. pisolitica*, he discussed whether *Girvanella* is most allied to the ‘Challenger’ Foraminifer, *Hyperammina vagans*, or to *Syringammina fragilissima*. Traces of the organism occur in the *Clypeus*-grit, but none are quoted from beds of the Great Oolite, nor from the Portland Oolite. The Author had already shown that the pisolites in the Coralline Oolite of Weymouth were not concretions, but forms of *Girvanella*. Excluding these, he showed that the spherules are of four types, of which one is the ordinary oolitic granule, while each of the others suggests the presence of *Girvanella*.

The characters of the genus, as seen under the microscope, were indicated, and four new species were described.

MISCELLANEOUS.

Note on a Young Specimen of Zoarces viviparus.

By ERNEST W. L. HOLT, Marine Laboratory, St. Andrews.

ON the 4th Jan. a female viviparous blenny extruded between forty and fifty young in the tank-room. Such of the young as were examined at the time measured, within a narrow margin, 2 inches. On the 25th Jan. several were measured, but, owing probably to the meagreness of the food-supply, little or no increase of growth was observable, the length varying from 2 to $2\frac{1}{2}$ inches. To this, however, there were two exceptions. One measured $1\frac{1}{2}$ inch, the other only $1\frac{1}{4}$ inch; the former appears normal in every respect except size, the latter is darker than the rest and exhibits a downward bend of the notochord about $\frac{1}{2}$ inch from its posterior end. The